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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,047	11/20/2003	Jing Li	P25,711-A USA	1275

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EXAMINER

ZIMMER, MARC S

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/718,047

Applicant(s)

LI ET AL.

Examiner

Marc S. Zimmer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 4-11 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Information Disclosure Statement

The information disclosure statement filed March 25, 2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Election/Restrictions

Applicant's election with traverse of Group I, claims 1-3 and 12-13 in the reply filed on August 4, 2005 is acknowledged. The traversal is on the ground(s) that the Examiner has not shown the claims to be independent.

The Examiner is uncertain as to precisely what showing the Applicant had expected as a means of justifying the restriction. Upon further review of the requirement, it appears that the restriction is proper as it fully outlines the different categories of invention into which the claims fall and rationalizes their separation.

The requirement is still deemed proper and is therefore made FINAL.

Claims 4-11 and 14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected methods of making and using the product set out in group I, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on August 4, 2005.

Claim Analysis

In claims 2 and 12, Applicant characterizes the metal center and ligands in terms of a classification assigned by Pearson. The Examiner is not familiar with this article

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nor was it furnished by Applicant for the Examiner's use thus the full scope of these claims cannot be precisely ascertained. (Applicant mentions some, but not all, of the metals and ligands that are aptly categorized as a Pearson soft or borderline acid and/or a Pearson hard- or borderline base.) Applicant is required to make available the Pearson reference so the full scope of the claims may be ascertained. In the interim, it will be assumed that the metals and ligands taught by the prior art are suited to Applicant's invention so that Applicant may be apprised of the Examiner's findings.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by an article entitled "Synthesis and Characterization of Microporous Coordination Polymers with Open Frameworks" authored by Seki et al., and published in the *Journal of Physical Chemistry, Part B* (2002), 106, 1380-85. Seki discloses the preparation of several 3-dimensional coordination polymers derived from copper complexes, one of several dicarboxylic acids, and triethylenediamine where the latter is a pillar ligand joining sheets formed by the metal complex and the dicarboxylic acids.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by an article entitled "Blue Photoluminescent Zinc Coordination Polymers with

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Supertetranuclear Cores" authored by Tao et al., and published in *Chemical Communications* (2000), 20, 2043-44. Tao discloses the preparation of a zinc-based coordination polymer derived from zinc oxo clusters, isophthalic acid or fumaric acid, and 4,4' bipyridine. Complex 2 has a 3-dimensional framework where bipy is a pillar ligand between sheets derived from the clusters and the dicarboxylic acid.

Allowable Subject Matter

Claims 3 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Examiner's search did not produce metal coordination polymers from combination of reactants specified by these claims though there seem to be many examples of coordination polymers adhering to the more broadly framed embodiments of Applicant's invention. Other documents discovered during the Examiner's search that did not antedate the effective filing date of this application include:

"A 3D metal-organic network, [Cu(glutarate)₂(4,4'-bipyridine)] that exhibits single-crystal to single-crystal dehydration and rehydration" authored by Rather et al., and published in *Chemical Communications* (2003), 7, 830-831. They disclose the preparation of coordination polymers derived from the reaction of copper (II) nitrate, glutaric acid, and 4,4' bipyridine in water.

"Structural Transformation Mediated by o-, m-, and p-Phthalates from Two to Three Dimensions for Manganese/Phthalate/4,4'-bpy Complexes (4,4'-bpy = 4,4'-bipyridine)" authored by Ma et al., and published in the *New Journal of Chemistry*

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(2003), 27, 890-894. Ma teaches three dimensional coordination polymers derived from a Mn complex, phthalic acid, and 4,4'-bipyridine. The three dimensional geometry is realized when the para-isomer of phthalic acid is employed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 17, 2005

Marc Zimmer
Marc Zimmer
AU 1712